CLAIMS

1. A method of determining a sought object contour in a digital microscope image, which comprises a plurality of image elements and reproduces a biological material, *characterized*

5   by the steps of

- assigning edge values (91) to at least a first subset of the image elements in the image;

- assigning values of a first gradient vector component (92) whose values each comprise a first linear combination of edge values of some surrounding image elements to at least a second subset of the image elements in the image;

10   - assigning values of a second gradient vector component (92) whose values each comprise a second linear combination of edge values of some surrounding image elements to at least a third subset of the image elements in the image; and

- calculating an estimate (94) of the sought object contour based upon values of the first and the second gradient vector components.

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2. A method as claimed in claim 1, wherein the first and the second linear combination each correspond to, in arbitrary order, a filtering in the image plane with a 3 by 3 filter and one differentiation in one direction each in the image plane.

20   3. A method as claimed in claim 2, wherein the 3 by 3 filter corresponds to a filtering with a weighted combination of a Laplace filter and a unity filter.

4. A method as claimed in any of claims 1-3, wherein the first and the second linear combinations are calculated using Fourier transform.

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5. An arrangement for determining a sought object contour in a digital microscope image, which comprises a plurality of image elements and reproduces a biological material, *characterized* by

- means for assigning edge values (84) to at least a first subset of the image elements in the

30   image;

- means for assigning values of a first gradient vector component (86) whose values each comprise a first linear combination of edge values of some surrounding image elements to at least a second subset of the image elements in the image;

- means for assigning values of a second gradient vector component (86) whose values each comprise a second linear combination of edge values of some surrounding image elements to at least a third subset of the image elements in the image; and

- means for calculating an estimate (87) of the sought object contour based upon values of the

5   first and the second gradient vector components.

6. A digital storage medium comprising a computer program for determining a sought object contour in a digital microscope image, which comprises a plurality of image elements and reproduces a biological material, *characterized* by instructions corresponding to the steps of

10   - assigning edge values (91) to at least a first subset of the image elements in the image;

- assigning values of a first gradient vector component (92) whose values each comprise a first linear combination of edge values of some surrounding image elements to at least a second subset of the image elements in the image;

- assigning values of a second gradient vector component (92) whose values each comprise a

15   second linear combination of edge values of some surrounding image elements to at least a third subset of the image elements in the image; and

- calculating an estimate (94) of the sought object contour based upon values of the first and the second gradient vector components.